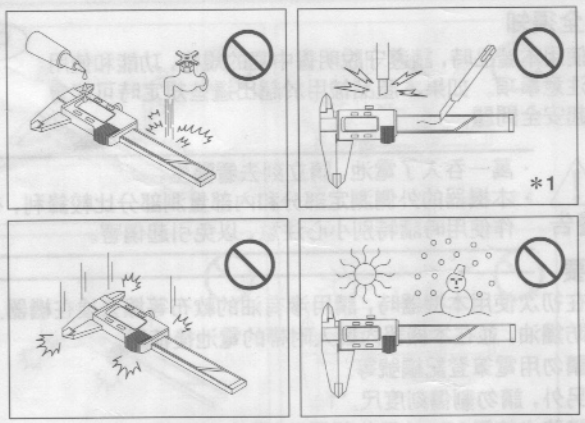
Digimatic Caliper/Pied à coulisse



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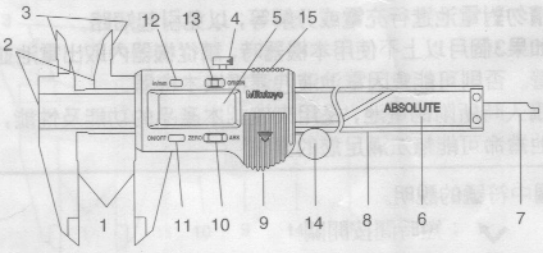

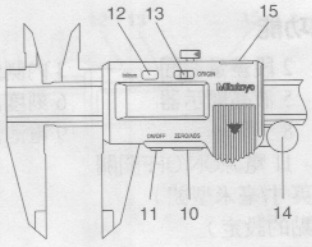

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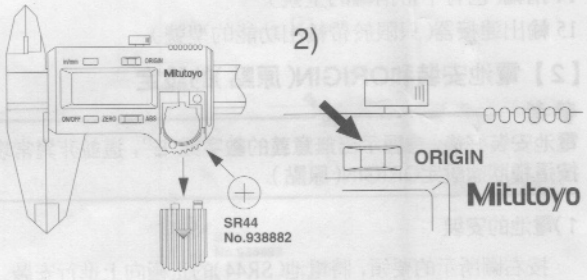

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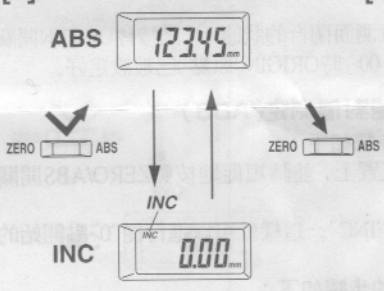
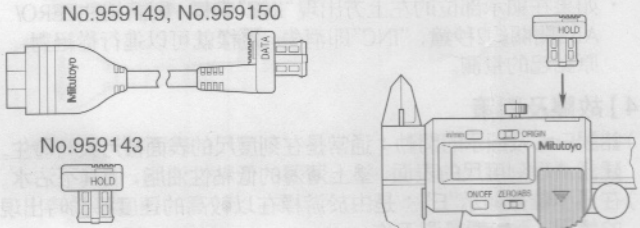


[4]

[6]



Safety Precautions

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To ensure operator safety, use this instrument in conformance with the directions and specifications given in this User's Manual.

WARNING

- If a battery is swallowed, immediately consult a doctor.
- The outside and inside measuring jaws of this Digimatic caliper have a sharp edge. Handle it with great care to avoid injury.

IMPORTANT

- Before using the Digimatic caliper for the first time, wipe the rust preventive oil from the caliper with a soft cloth soaked with cleaning oil. And, install the supplied battery in the caliper.
- Do not mark the caliper with an electric engraving pen. Do not scratch the scale. *1
- Always use an SR44 battery (silver oxide cell).
- Do not attempt to charge or disassemble the battery. It may be short circuited.
- If the caliper will not be used for more than three months, remove the battery from the caliper and store it properly. Otherwise, liquid may leak from the battery and damage the caliper.
- The supplied batteries are used only for the purpose of checking the functions and performance of the caliper, therefore it may not satisfy the specified battery life.

● Description of Symbols

: Press the button.

: Press and hold down the button.

[1] Name and Function of Each Part

1 Outside measuring faces 2 Step measuring faces
3 Inside measuring faces 4 Slider clamp screw 5 Display (LCD)
6 Main scale 7 Depth measuring blade 8 Beam
9 Battery compartment lid 10 ZERO/ABS switch (toggles between incremental and absolute measurement. See Sec. [3].)
11 Power ON/OFF switch 12 Inch/mm switch (only for inch/mm model)
13 ORIGIN switch (for setting absolute origin)
14 Thumb roller (depending on the model)
15 OUTPUT connector (applies to data output type)

[2] Battery Installation and Origin (Zero Point) Setting

IMPORTANT

Set up the origin of the caliper after installing the battery. Otherwise, the error sign ("E" at the LSD) may appear, resulting in incorrect measurements.

1) **Installing the Battery**
Remove the compartment lid and install the SR44 battery with its positive side facing up.

2) **Setting the Origin**
After turning on the power, close the jaws and hold down the ORIGIN switch for more than one second. The "0.00" display appears, indicating Origin (zero point) setting is complete.

[3] Comparison Measurement and Absolute Measurement

● Perform comparison measurement (INC mode) as follows.
Open the jaws to a given extent where the caliper is to be zero-set, then press the ZERO/ABS switch for less than a second. The caliper is zero-set with "INC" indicator on the LCD, being ready for comparison measurements.

● Perform absolute measurement (ABS mode) as follows.

- The caliper always enters the ABS mode when the power is turned on, displaying dimensions from the zero point.
- Unless "INC" is displayed on the LCD, absolute measurement can be continued.
- If "INC" appears in the upper left of the LCD, hold down the ZERO/ABS switch for more than two seconds. "INC" will disappear and the caliper will be ready for measurement with respect to the absolute origin.

[4] Error Symptoms and Remedies

1) **ErrC and display flickering:** Appear when the scale surface is stained. The surface of the scale should be cleaned and a small amount of low viscosity oil should be applied to repel water.

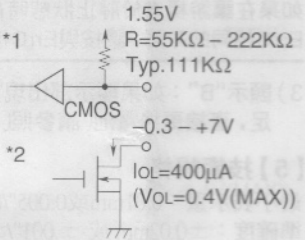
2) **"E" at the LSD:** Appears if the slider is moved at a high speed. This does not affect measurement results.

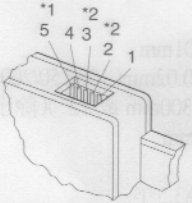
NOTE

If "E" is displayed when the slider is not being moved, the caliper is in the same state as that of ErrC. Use the ErrC remedy.

[7]

Pin No.	I/O	Signal
1	–	GND
2	O	DATA
3	O	CLOCK
4	–	—
5	I	$\overline{\text{REQUEST}}$





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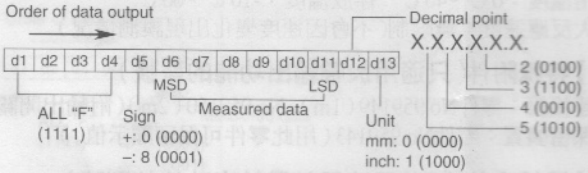

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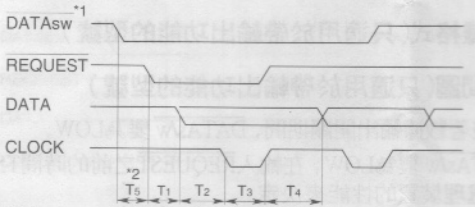

0ms≤T1≤93.75ms
110μs≤T2≤140μs (TYP:122μs)
110μs≤T3≤140μs (TYP:122μs)
230μs≤T4v260μs (TYP:244μs)

3) **"B" indicator:** Appears when the battery voltage is low. Immediately replace the battery. (See Sec.[2].)

[5] Specifications

Resolution	:	0.01mm or .0005″/0.01mm
Accuracy	:	±0.02mm or ±.001″/±0.02mm (100/150/200mm or 4/6/8″), ±0.03mm or ±.0015″/±0.03mm (300mm or 12″) (except special-purpose digimatic calipers)
Repeatability	:	0.01mm or .0005″/0.01mm
Maximum response speed	:	Unlimited (Miscount will not result due to slider speed.)
Power	:	SR44 (silver oxide cell) 1 piece
Battery life	:	3.5 years under normal operation
Operating temperature	:	0°C to 40°C
Storage temperature	:	–10°C to 60°C

[6] Optional Accessories

- Connecting cable (with data output switch) : Part No.959149 (1m), 959150 (2m)
- Data Hold Unit (Part No.959143) : Holds the display value.

[7] Connector Pin Assignment

[8] Data Format

[9] Timing Chart

*1: $\overline{\text{DATAsw}}$ will stay in LOW while the data output switch is held down.

*2: T_5, an interval that starts if $\overline{\text{DATAsw}}$ falls to LOW and ends if $\overline{\text{REQUEST}}$ is input, depends on the performance of the connected data processing unit.

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